

Applicant: Cesur Celik et al.
Application No.: 10/826,681
Examiner: N. Mai

Remarks

Claims 1-12, 14, and 16-26 are presented for the Examiner's review and consideration. Claims 1 and 2 have been amended and claims 21-26 have been added. Applicants believe the claims amendments, additions, and accompanying remarks herein serve to clarify the present invention and are independent of patentability. No new matter has been added.

Claim Rejections

The claims have been amended and new claims have been added in light of the Office Action in order to more particularly claim what Applicants believe are their invention. In particular, claim 1 has been amended to claim a base metal alloy powder comprising at least about 60% by weight Ni, about 0.2% to 30% by weight Cu, and about 6% to 40% by weight Cr. The powder comprises particles which are substantially spherical and comprise an average particle size from about 25nm to about 700nm. Support for these amendments can be found throughout the text and the claims as originally filed. No new subject matter has been added through these amendments and additions.

The Examiner has objected to claims 1, 12, 14 and 18-20 on the grounds that they are anticipated by Akimoto et al. (US Patent No. 6,530,972). Applicants submit that the claims as amended overcome these objections. In one embodiment Akimoto et al. discloses a NiCu alloy powder comprised of 70% Ni and 30% Cu wherein the particles are spherical and having an average particle size of 600nm. Akimoto et al. does not teach a NiCuCr alloy powder. As a result, Applicants submit that claim 1 cannot be anticipated by Akimoto et al. As claims 12, 14 and 18-20 all depend from claim 1, Applicants submit that these, too, cannot be anticipated by Akimoto et al.

The Examiner has objected to claims 2 through 7 on the grounds that they are obvious over Akimoto et al. in view of Igarashi et al. (JP411067588). Applicants submit that the claims as amended combined with the following argument overcome these objections.

As discussed above, Akimoto et al. discloses a NiCu alloy powder comprised of 70% Ni and 30% Cu wherein the particles are spherical and having an average particle size of 600nm.

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Igarashi et al., on the other hand, discloses an electronic component comprised of alternating laminated layers of dielectric and electrodes. The main components of the internal electrodes are Cu, Ni or NiCu alloys and may include one or more "auxiliary components" selected from P, Cr, Fe, Al, Si, Co, W, Mn, Sn, Mo and B in amounts of 0.01% to 30%.

At paragraph 5 of the Office Action, the Examiner states that:

"... it would have been obvious to one of the ordinary skill in the art at the time the invention was made that the base metal alloy powder taught by Akimoto et al includes at least one of the auxiliary component in the amount taught by Igarashi because such an addition would not only increase the resistance value of the electronic component but also facilitate the control of the resistance value as taught by Igarashi."

In light of the discussion above Applicants submit that Examiner has correctly understood that, as discussed above, Igarashi et al. teaches adding an auxiliary component to *increase the resistance* of the internal electrodes of the component. Indeed, referring to paragraph 12 of Igarashi et al., it is clear that the auxiliary components are selected to have a resistivity higher than that of Ni and that the resistivity of the internal electrodes is increased when the admixture of main components and auxiliary components are subsequently baked, thereby giving the internal electrodes the function of a resistor. However, Igarashi et al. also teaches increasing this resistance in order to yield CR circuits, that is circuits which contain a series of capacitors "C" inter connected by a series of resistors "R".

In Akimoto et al., on the other hand, the powder exhibits a number of characteristics which make it preferable for the fabrication of capacitors, *in particular a low and reliable resistance*. Indeed, one of the problems being addressed by Akimoto et al. is an increase in the resistance of the electrodes. In this regard, the text at column 1 lines 61 through 64 states:

"Furthermore, a nickel powder quickly sinters in a non-oxidizing atmosphere, and provides a discontinuous film of internal conductor due to its oversintering,

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thereby causing problems such as *an increased internal resistivity ...*"

Additionally, the text at column 6, lines 6 through 12 states:

"... when the powder is used in a conductor paste for an internal or external conductor of a multilayer capacitor, *there will be no increase in resistance* due to the oxidation of the conductive metal ... thereby allowing a capacitor with outstanding characteristics to be prepared."

It is clear that in order to find obviousness based on a combination of elements disclosed in the prior art there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the Applicant. Indeed, MPEP 2143.01 provides:

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)

In light of the above, as Akimoto et al. teaches reducing the electrode resistance in order to arrive at an improved capacitor and Igarashi et al. teaches increasing the electrode resistance in order to fabricate a CR circuit, a person of skill in the art would not be motivated to combine the teachings of Akimoto et al. and Igarashi et al. As a result, Applicants submit that the Examiner's objection based on obviousness is incorrect and respectfully requests retraction of same.

New Claims

Claim 21 has been added. Claim 21 depends from claim 1, necessarily including all the elements of its base claim. Accordingly, Applicants respectfully submit that this dependent claim is allowable over the cited prior art at least for the same reasons.

New independent claim 22 has also been added and is similar in scope to dependent claim 21. Support for this claim includes claims 1, 13 and 15 as filed and page 8, lines 26 through 30.

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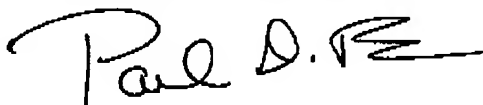
New claims 23-26 depend from claim 22.

Conclusion

In light of the foregoing remarks, this application is now in condition for allowance and early passage of this case to issue is respectfully requested. If any questions remain regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

A fee of \$100 under 37 C.F.R. 1.16(i) for four claims in excess of twenty and a fee of \$225 under 37 C.F.R 1.17(a) (1) for a two month extension of time are believed to be due and a Fee Transmittal Sheet with payment by credit card is submitted concurrently herewith. However, please charge any required fee (or credit any overpayments of fees) to the Deposit Account of the undersigned, Account No. 500601 (Docket No. 7012-X04-002).

Respectfully submitted,



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